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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,985	11/16/2001	David Benoit Didier Duperray	US018187	7970
24737	7590	08/18/2005	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			LU, JIA	
			ART UNIT	PAPER NUMBER
			2634	

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/993,985

Applicant(s)

DUPERRAY, DAVID BENOIT  
DIDIER

Examiner

Jia W. Lu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see pages 9-11, filed on July 5, 2005, with respect to the rejection(s) of claim(s) 1, 8, 11 and 14 under 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of US patent 6,721,370, US patent 6,275,103 and US application publication 2004/0037364.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 4, 8, 10-15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent 6,246,286 (previously presented), in view of US patent 6,721,370, US patent 6,275,103 and US application publication 2004/0037364.

- a. Regarding base claim 1, patent '286 discloses a transmitting system comprising a quadrature modulator (figure 2, element 150), a variable gain amplifier (figure 2, element 170), an up-converter (figure 2, element 160), a power amplifier with a variable gain (figure 2, element 190), and phase adjusting means based on a pre-stored phase adjustment information (figure 2, element 111). While '286 does not disclose or teach the use of a variable-gain power amplifier or a phase adjustment based on simultaneous gain changes of amplifiers, these elements are well known in the art. '364 teaches the use of a variable-gain power amplifier in a transmitter device (paragraph 0016), and it would have been obvious to replace the power amplifier in '286 such a variable-gain element in order to provide greater flexibility in the transmitter. '370 teaches the phase compensation unit in its transmitter to be based on the gain changes in its variable gain amplifier, because "the phase relationship between the input signal and output signal of the variable gain amplifier is unbalanced upon a gain change" (column 1, lines 50-60). Finally, '103 teaches that there is mutual gain changes when using simultaneously a variable gain amplifier and a power amplifier (column 9, lines 52-58 and column 10, lines 36-56) and that small adjustments can be made to reflect overall gain changes. It would have been obvious to one ordinarily skilled in the art to combine these elements into one transmitter in order to offer a flexible transmitter

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that makes small phase adjustments to account for gain shifts from various components in a circuit.

- b. Regarding claims 4 and 15, patent '286 discloses a lookup table containing information for phase adjustment (column 9, lines 22-25).
  - c. Regarding claim 10, patent '286 discloses a system as described in part a above further comprising a lookup table, as described in part b above.
  - d. Regarding claim 11, patent '286 discloses a method of phase adjustment as employed by the system described in part a above.
  - e. Regarding claim 12, patent '286 further discloses the use of a band pass filter (figure 6, element 341) arranged between up-converter (figure 6, element 160) and power amplifier (figure 6, element 190).
  - f. Regarding claim 13, patent '286 accounts for higher frequencies provided by power amplifier (column 9, lines 11-14).
  - g. Regarding claim 14, patent '286 describes a communication device including transmitter described in part a above (figure 1).
  - h. Regarding claim 18, patent '286 describes the device to include a processor (column 3, line 62) and a storage unit (column 11, line 32).
2. Claims 2, 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patents 6,246,286, 6,721,370, 6,275,103 and US application publication 2004/0037364 as applied to claims 1 and 8 above, and further in view of US patent 5,202,906. Patent '286 describes the system that current claims are

dependent on, however it fails to disclose the operation of keeping a phase different under a certain value. Patent '906 describes an operation in a system that mandates that the phase difference be kept under a predetermined value (column 7, lines 2-6). Because this operation induces lower fluctuation, it would be obvious to one skilled in the art to employ it for purpose of reducing power consumption.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over US patents 6,246,286, 6,721,370, 6,275,103 and US application publication 2004/0037364 as applied to claims 1 and 8 above, and further in view of US patent 4,194,200. Patent '200 discloses the use of Automatic Gain Control in a transceiver system that provides constant gain independent of received signal strength (column 4, lines 30-31). It is obvious to one ordinarily skilled in the art to use AGC to provide constant gain in a transmitter system to preclude overflow and reduce power consumption.
4. Claims 5 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patents 6,246,286, 6,721,370, 6,275,103 and US application publication 2004/0037364 as applied to claims 1 and 8 above, and further in view of US patent 6,831,954. Patent '954 describes an apparatus which comprises phase adjusting means using a quadrature phase rotator (figure 2, element 42) rotating quadrature base band signal prior to modulation (figure 2, element 82). It would be obvious to one skilled in the art to adopt this phase shifting means for speedy and easy phase compensation.

5. Claims 6 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patents 6,246,286, 6,721,370, 6,275,103 and US application publication 2004/0037364 as applied to claims 1 and 8 above, and further in view of US patent 6,123,031. Patent '286 discloses the compensation for nonlinearities of the power amplifier (column 8, lines 55-57) in its transmitter; however, it does not specifically mention temperature to be one of those nonlinearities. Patent '031 describes temperature to be nonlinearities in the amplifier. It also discloses the use of a temperature sensor (figure 1, element 28) in connection with a lookup table containing relevant information (column 3, lines 34-49).
6. Claims 7 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patents 6,246,286, 6,721,370, 6,275,103 and US application publication 2004/0037364 as applied to claims 1 and 8 above, and further in view of US patent 6,295,442. Another nonlinearities not specifically mentioned in patent '286, as described above, is battery voltage. Patent '442 discloses the use of a lookup table (figure 9, element 742) processing detected values (figure 9, element 732) for battery voltage (column 8, lines 6-9).

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jia W. Lu whose telephone number is 571-272-6042. The examiner can normally be reached on Mon- Fri, 9:30AM-5:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571)272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jia Lu  
Examiner



**STEPHEN CHIN**  
**SUPERVISORY PATENT EXAMINER**  
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